

Experimental Biology and
Medicine Institute

December 31, 1948

Dr. Severo Ochoa
Department of Pharmacology
New York University College of Medicine
477 First Avenue
New York, New York

Dear Severo:

I guess our letters crossed in the mail, and I appreciate your sending along Ohlmeyer's letter. The unpleasant situation is, as I indicated in my letter to you, that we are having trouble enough getting permission for him and his immediate family to enter the country, let alone anybody else associated with him.

Bernie, as you know, is working on the isolation of TPN cytochrome reductase from liver and has found the Zwischenferment system the most convenient for reducing TPN. Unfortunately, the last batch of Zwischenferment that was made, which came from Anheuser-Busch yeast, had a very high cytochrome reductase activity. While this preparation is twice as active with respect to its Zwischenferment activity, it cannot be used conveniently for assay of cytochrome reductase activity from other sources. If you are not already committed to the use of the old batch of Zwischenferment that we gave you, would it be possible to send you in substitution for it a sample of our new and more potent preparation. However, if the presence of this strong cytochrome reductase activity in our new preparation would also interfere with any of your measurements, could you possibly send us about 50 mg. which would tide us over until we can prepare some more material that resembles the Senate preparation and its properties.

The biotin story sounds awfully good and certainly encourages more intensive work on simpler systems. For my part, I have been getting rather discouraged these days. Everything I do ends up rather poorly, but I'll keep trying. The only aspect of the work that is somewhat bright is the synthesis of FAD which we have finally gotten to go in crude yeast preparations. At the moment, it suggests that flavin mononucleotide plus ATP are the reactants,

but the system is far too weak and crude to be able to say more about the reaction.

With fond regards and best wishes.

Sincerely,

Arthur Kornberg.

* Senate Beer.

AK:T